WHAT IS CLAIMED IS:

1. A method for producing local temperature increases in the inside of materials by way of focused sound signals in a target region, thus within a volume which is situated closely to the focus, wherein for the increased production of heat as a result of acoustic absorption, such sound signals are generated in the target region which are radiated from a sound emitter and which are not produced by the radiation of a single sinusoidal pressure-time signal, and whose pressure-time course in the target region is neither sinusoidal nor has the same magnitudes of pressure and expansion amplitudes, but are designed such that the magnitudes of the pressure amplitudes are larger than those of the expansion amplitudes, and wherein the pressure-time course with regard to the idle (rest) pressure condition of the material is designed adapted asymmetrically to the non-linear elastic and non-linear absorbing properties of the material to an extent that with the focused propagation of sound in cooperation with the non-linear elastic and non-linear absorbing properties of the material, the pressure-time course produces a local heating gain in the target region in comparison to sinusoidal signals with the same output.

2, A method according to claim 1, wherein the pressure-time course in the target region is created in that several mono-frequency signals are superimposed which are delivered by a sound emitter.

3. A method according to claim 1, wherein the pressure-time course in the target region is created in that asymmetrical sound signals are delivered by a sound emitter.

4. A method according to claim 1, wherein the pressure-time course in the target region is created in that frequency-modulated chirp signals are delivered by a sound emitter.

5. A method according to claim 1, wherein the pressure-time course in the target region is created by way of superposition of asymmetrical sound signals according to claim 3 with at least one mono-frequency signal, and is delivered by a sound emitter.

6. A method according to claim 1, wherein the time-pressure course in the target region is created by way of superposition of frequency-modulated chirp signals according to claim 4 with at least one mono-frequency signal, and is delivered by a sound emitter.

7. A method according to one of the claims 1 to 6, wherein the use is effected on biological materials.

8. A method according to one of the claims 1 to 6, wherein the use is effected on technical (industrial) materials

9. A method according to one of the claims 1 to 7, wherein an extra-corporal treatment is effected on living beings.

10. A method according to claim 9, wherein a minimal evasive treatment is effected on living beings.

11. A method according to one of the preceding claims, wherein the focusing is carried out with a self-focusing arrangement.

12. A method according to one of the claims 1 to 10, wherein the focusing is carried out with a reflector-focusing arrangement.

13. A method according to one of the claims 1 to 10, wherein the focusing is carried out with a lens-focusing arrangement.

14. A method according to one of the claims 1 to 13, wherein for producing the pressure-time course in the target region, one uses a piezoelectric emitter which is equipped with piezoceramics with natural resonances which differ from one another, for producing at least two different sound signals acting simultaneously in the target region.

15. A method according to one of the claims 1 to 13, wherein for producing the pressure-time course in the target region, one uses a piezoelectric emitter which comprises at least two zones for producing at least two different sound signals acting simultaneously in the target region.

16. A method according one of the preceding claims, wherein it is combined with a picture-providing method.